otherwise. 8/ 9/ The net effect of these two opposite forces is not entirely clear. However, what seems to be true is that the importance of changes in external costs varies directly with changes in existing and expected future capacity utilization rates: if the economy is operating near capacity, changes in the real cost of funds may have a more significant influence on the allocation of resources between consumption and investment.

Impact of Policy-Induced Deficits Caused by Tax Incentives for Investment. If policy-induced deficits arise because of the revenue losses associated with enhanced tax incentives for

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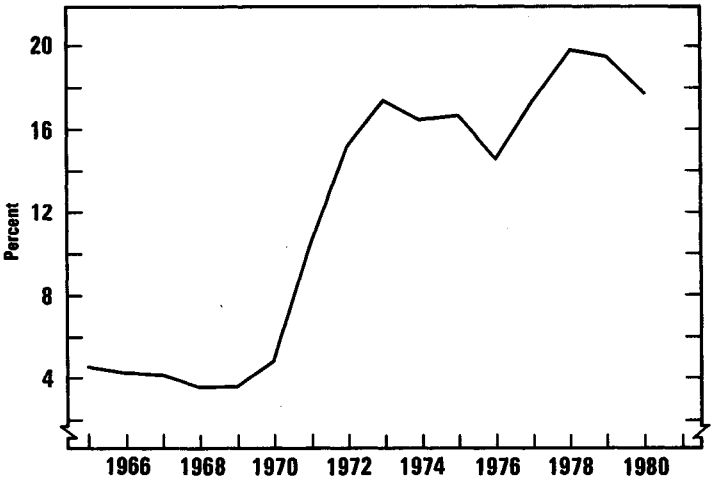
8/ Some economists have argued on the other hand that increased deficits financed by borrowing cannot increase aggregate spending. This is because increased federal borrowing may necessitate increased taxes in the future to pay the interest on the increased debt, thereby eliminating the impact of the deficit on spending. See Robert Barro, "Are Government Bonds Net Wealth?" Journal of Political Economy, vol. 82 (1974), pp. 1095-1117. For detailed arguments to the effect that such considerations only partially offset the demand impacts of deficits, see James Tobin and Willem Buiter, "Fiscal and Monetary Policies, Capital Formation, and Economic Activity," in George M. Von Furstenberg (ed.), The Government and Capital Formation (Ballinger, 1980, pp. 73-151). To the extent that consumers do not treat government bonds as postponed taxes, the upward movements in interest rates caused by increases in the deficit may be even stronger, however. This is because increases in private wealth (government bonds) may strengthen the demand for money, putting further upward pressure on interest rates. See Alan Blinder and Robert M. Solow, "Does Fiscal Policy Matter?" Journal of Public Economics (2), (1973), pp. 319-37.

9/ A different line of argument with similar conclusions is that increases in government borrowing may raise private investment by reducing interest rates on corporate bonds, even though rates on government bonds go up. This may occur if investors do not regard government and private bonds as substitutes, but the evidence is not strong. See Benjamin Friedman, "Crowding Out or Crowding In? Economic Consequences of Financing Government Deficits," Brookings Papers on Economic Activity, 3 (1978), pp. 593-654.

Figure 22.

Share of U.S. Public Debt Held by Foreigners



SOURCE: U.S. Office of Management and Budget.

investment, the negative impact of the deficits on investment may be partially or entirely offset by the tax incentive.

"Self Financing" Aspects of Deficits. Policy-induced deficits that occur in the presence of unemployed resources may stimulate aggregate production and income by an amount exceeding the deficit increase because of the multiplier process. The newly-generated income in turn results in some new saving, which helps finance government and private-sector borrowing, and also generates new tax revenue that offsets some of the initial increase in the deficit.

The Role of Inflows of Foreign Capital. One consequence of the interdependence of the world economy is that financial capital moves relatively freely from country to country in search of high interest returns. The United States is especially attractive to overseas investors because it is considered a safe environment for investment. As a result, significant capital inflows to the United States often occur when U.S. interest rates rise relative to those in other countries. Such inflows not only limit the rise in interest rates in the United States, but also, of course, help finance U.S. government and private-sector spending. The potential significance of these inflows of funds is illustrated in Figure 22, which shows that foreign holdings of Treasury securities currently amount to almost a fifth of total outstanding federal

debt. Because of the behavior of exports and interest rates in other countries, however, few observers expect inflows of foreign capital to prevent projected budget deficits from drawing heavily on domestic savings. 10/

What Use Does Government Make of Borrowed Funds?

When government deficits cause interest rates to rise and thereby reduce private investment, the impact on productivity growth cannot be judged easily without knowing what use the government makes of the funds it borrows. Some government expenditures, such as those on education, medical care, airports and highways, research and development, and worker training programs represent public-sector investments that themselves may contribute to the growth of productivity in the private economy. If the federal budget is put on an accounting basis that differentiates investment from other types of spending, as is conventional in private firms and the governments of many other countries, the deficit for many past years is vastly reduced. 11/ Since some investment-type spending programs have recently been cut, however, it is unlikely that these factors will mitigate the productivity impacts of the deficit over the next few years.

How Do State and Local Government Budgets React?

Ultimately what matters for the economy is the behavior of the deficits of all governments taken together, rather than the deficit of the federal government alone. Thus, policy-induced changes in the federal deficit may have little or no impact on interest rates or other economic variables if they induce offsetting changes in state and local budgets. If the federal deficit is reduced, for example, by transferring spending programs to other levels of government and reducing their net surplus, little if any improvement in interest rates or other economic conditions can be expected.

10/ See, for example Henry Wallich, "The Federal Reserve and Interest Rates," remarks delivered at the 1981 annual meeting of the American Economic Association, Washington, D.C., December 28, 1981.

11/ See Joseph Scherer, "Is the Federal Budget Balanced?" Challenge (September/October 1979) pp. 41-43.

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Proposals to Reduce the Investment Impact of Deficits

While each of the factors described above may at times help mitigate the harmful effects of deficits, their effects taken together clearly seem insufficient to prevent the deficits that are projected during the next several years from having a major detrimental impact on investment and productivity growth.

Professor James Tobin and others have proposed shifting the "mix" of macroeconomic policy--tightening the budget while at the same time using easier monetary policy to reduce real interest rates. Such an approach might result in no net stimulus to total output, but would instead shift the composition of output away from consumption and toward investment.

Professor Martin Feldstein, on the other hand, would follow a tight monetary policy to slow inflation but offset the increased real interest rates through tax benefits for business investment. 12/

Although both the Feldstein and Tobin approaches are aimed at increasing investment spending, the compositional changes in total spending and output would probably differ. If the deficit were reduced and real interest rates scaled back through an easier monetary policy, as in Tobin's plan, the housing and automobile industries would gain relief from their present depressed state; moreover, the pattern of business investment might differ from that under the Feldstein approach, although exactly what these differences might be is hard to predict. The inflation rate might ultimately be lower under the Feldstein approach since long-run rates of money growth would be lower, but both approaches appear to be consistent with significant reductions in inflation from present levels.

12/ The budget deficit would increase under this proposal but by no means as much as now projected. The multiple budget initiatives taken by the Congress last summer, aside from the tax benefits for business, are not necessarily consistent with the Feldstein proposal.

BUDGET MEASURES TO REDUCE THE DEFICIT

The prospects of large budget deficits during the fiscal 1982-1983 period, with no approach to the goal of a balanced budget in fiscal year 1984, have intensified the search for budget measures that would further reduce spending or restore some of the large revenue losses resulting from the Economic Recovery Tax Act of 1981. This concluding section briefly discusses the economic implications of several tax and spending options. 13/

Six tax policy and other revenue-enhancing options are examined: (1) postponing or rescinding the personal tax rate reductions now scheduled for mid-1983; (2) broadening the tax base by eliminating or reducing various tax expenditures; (3) raising additional revenues through narrowly-focused excise taxes or by introducing a broad-based national sales, value-added, or expenditure tax; (4) imposing a windfall profits tax on revenues stemming from the decontrol of natural gas prices; (5) levying a tariff on imported oil; and (6) charging market prices for the goods and services provided by the federal government. In addition to these revenue-increasing options, four outlay-reduction options are considered: (1) reducing private-sector subsidies for export promotion, agriculture, energy, and transportation; (2) reducing grants to state and local governments; (3) reducing defense spending through the adoption of alternative weapon systems; and (4) reducing individual benefit levels in Social Security, other retirement programs, Medicare, and food stamps.

Postponing or Rescinding the Personal Tax Rate Reductions. The largest source of revenue loss from the Economic Recovery Tax Act of 1981 is the 23 percent across-the-board reduction in individual income tax rates, phased in over a 33-month period. 14/ One way to reduce the deficit would be to delay or rescind the adjustments in tax rates now scheduled for mid-1983.

13/ A comprehensive analysis of budget options designed to reduce the deficit is presented in: Congressional Budget Office, Reducing the Federal Deficit: Strategies and Options (February 1982).

14/ The CBO estimates that these rate reductions will result in static revenue losses of $25.3 billion in fiscal year 1982, $65.1 billion in fiscal year 1983, and $102.3 billion in fiscal year 1984.

Postponement or elimination of the 1983 reductions in personal tax rates would lower after-tax income growth and dampen the growth of consumer spending. Slower growth of aggregate demand would likely have some retarding effect on the rate of inflation, but it would probably also raise the level of unemployment which, in turn, would slow the growth of revenues and raise the growth of federal spending for income-support programs. These secondary budget effects would offset some of the deficit-reducing effects caused by the delay or elimination of the 1983 tax rate reductions.

To the extent that personal savings and labor supply are responsive to changes in marginal tax rates, this option would have some adverse supply-side effects. However, if the reduction in the federal deficit more than offset the reductions in private savings, the net saving rate would rise, providing additional funds for capital formation--a major consideration from the point of view of long-run productivity growth.

Reducing Tax Expenditures. Congress could enlarge the effective tax base by eliminating or reducing some "tax expenditures." 15/ In general, tax expenditures increase the flow of resources to particular activities at the expense of others, an outcome that could reduce productivity by distorting the allocation of resources For example, tax expenditures for owner-occupied housing have made this form of investment relatively attractive (on an after-tax basis), which has tended to draw resources away from other types of investment. Likewise, the deductibility of interest

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15/ Tax expenditures are the revenue losses resulting from the perferential tax treatment of various sources and uses of income, designed to allocate resources to specific activities or to reduce hardships for specific groups. The tax expenditures producing the largest revenue losses in 1981 were the deductions for mortgage interest and property taxes on owner-occupied housing, the deduction for non-business state and local taxes; the 60 percent exclusion for capital gains; the exclusion of employer contributions for medical insurance premiums and medical care; the exclusions for Social Security benefits and for pension contributions and earnings; and the investment tax credit for business equipment. For a discussion of the concept and revenue impacts of tax expenditures, see Congressional Budget Office, Tax Expenditures: Current Issues and Five-Year Budget Projections for Fiscal Years 1982-1986 (September 1981).

on consumer credit tends to encourage consumption relative to saving.

Some types of tax expenditures, however, such as those that increase the after-tax return on personal saving and business investment, may encourage economic growth. Reducing these tax preferences would tend to dampen incentives to save and invest, although the sensitivity of personal saving and capital formation to changes in after-tax rates of return remains an unresolved empirical issue.

Consumption-Based Taxes. Additional revenues could be raised through narrowly-focused or broad-based forms of consumption taxes. A major argument in favor of consumption-based taxes is that they are thought to increase the relative attractiveness of saving.

A narrowly-focused consumption tax (or excise tax) is one that applies to a specific commodity. In some cases, reduced consumption of the taxed commodity may be deemed desirable from a social viewpoint. The major U.S. excise taxes have been unit taxes on tobacco, alcoholic beverages, and gasoline, and ad valorem taxes on some items such as telephone service. Since unit taxes on cigarettes, alcoholic beverages, and gasoline have not been increased since 1951, these taxes have declined significantly as a proportion of the sales price.

In contrast to narrowly-focused commodity taxes that primarily affect the relative prices of specific goods and services, broad-based consumption taxes primarily affect the relative attractiveness of saving and consumption. Thus they have more significant macroeconomic implications for growth and productivity.

A broad-based consumption tax can be implemented in various ways, including a national sales tax or a value-added tax. The major difference between these two types of tax is that the former is collected at the retail level, while the latter is collected at each stage of production. An argument against such taxes is that they are considered regressive since they impose a disproportionate burden on those with relatively little discretionary income. Also, these taxes directly increase the price of goods and services, and thus would temporarily raise the rate of inflation as prices adjusted from one level to another.

To reduce the regressive nature of a consumption tax, some analysts have proposed a progressive-rate expenditure tax. A major difference between an expenditure tax and a sales or value-added tax is that a tax on expenditures could be collected in the same

way that income taxes are now collected. A taxpayer would report income (from all sources) as well as net saving. The difference would be the tax base to which the rate schedule would be applied. The rate structure could be characterized by any degree of progressivity, a feature impractical in the case of a national sales or value-added tax. Finally, an expenditure tax would not have direct price-level effects.

A Windfall Profits Tax on Decontrolled Natural Gas. Another potential source of revenue would be a tax on the windfall profits resulting from the decontrol of natural gas prices. The major difference between such a tax and the current windfall profits tax on oil is that part of the gas tax may be shifted forward to gas consumers through an increase in the price of gas above its decontrolled level. In the case of oil, the windfall profits tax could not be shifted because the price of oil is effectively determined by foreign producers. In contrast, domestic gas producers do not face such a price constraint, except to the extent that consumers can switch from gas to oil, coal, or other substitutes.

A Tariff on Oil Imports. As in the case of a windfall profits tax on decontrolled natural gas, a tariff on imported oil would have a direct impact on prices. However, in contrast to other energy taxes, at least part of the tax would be borne by foreign producers. Initially, the tariff would raise the price of imported oil to U.S. consumers; but eventually domestically-produced oil prices would rise to equal the after-tariff price of imported oil. The increase in the price of oil in the United States would reduce the quantity of oil demanded, which in turn would lead foreign producers to lower their prices or restrict output by more than otherwise. As a result, foreign producers would bear some of the burden of the oil tariff.

Charging Market Prices or Full Cost for Goods and Services Provided by the Federal Government

The federal government provides numerous products and services to individuals and businesses at lower than market prices and often well below costs. In many instances, the subsidies implicit in such pricing policies cannot be justified on cost-benefit grounds. As a result, the allocation of resources is distorted. Accordingly, a case can be made for substantially increasing user fees for highways, airways, and inland waterways; for extending the user charge principle to federal deep-draft navigation activities; for

introducing user charges for many of the services provided by the Department of Commerce, the Federal Reserve System, the Federal Communications Commission, and the Securities and Exchange Commission, among others; for increasing entrance fees to national parks; for charging the utility industry the full cost of uranium enrichment and nuclear waste disposal; and for imposing a new fee on oil imports to fund the Strategic Petroleum Reserve.

Reduce Private-Sector Subsidies for Export Promotion, Agriculture, Energy, and Transportation

Currently, the federal government subsidizes a great deal of private-sector activity either in the form of grants, or in the form of loans at below-market interest rates. Again, many of these subsidies cannot be justified on cost-benefit grounds. This may be true of export promotion programs such as DISC and the Export-Import Bank; agriculture programs such as tobacco and wool subsidies, and dairy and other commodity price supports; loan programs for the Rural Electrification Administration and the Farmers Home Administration; energy development subsidies in the form of tax expenditures, loans and loan guarantees, and direct expenditures; and subsidies for Amtrak and for maritime construction and operating programs.

Reduce Grants to State and Local Governments

State and local grants could be reduced using two general approaches. First, reduce grants to the least-needy governments, focusing assistance on those jurisdictions least able to provide for themselves. Second, reduce federal aid to all state and local government units by either pruning ineffective programs or by consolidating existing categorical grants into less-restricted block grants.

Other opportunities exist for further targeting federal grants to state and local governments. For example, Community Development Block Grants, Urban Mass Transit Grants, or Urban Development Action Grants could be reduced to jurisdictions with greater fiscal capabilities. The same is true of federal fiscal assistance provided under the General Revenue Sharing program. Reductions in grants to state and local governments can contribute to reduced federal deficits, but will not reduce the total government deficit unless state and local governments respond by either increasing their taxes or cutting their spending.

Reduce Defense Spending Through the Adoption of Alternative Weapon Systems

One budget strategy would be to reduce the pace of modernization of strategic forces. For example, the Congress could leapfrog the B-1 Bomber and proceed directly to an Advanced Technology Bomber (ATB) while increasing B-52 alert rates. The Congress could also modify the tanker re-engining program; it could cut back procurement of nuclear attack submarines, substituting in their stead new-generation diesel-electric submarines; and it could limit M1 tank procurement and supplement it with M60s. Finally, the Congress could seek additional economies in defense pay and support costs.

Reduce Individual Benefit Levels

Much of the growth in the federal budget in recent years has taken place in income security and health programs, due to legislated increases in benefit levels during the early 1970s, automatic indexing of cash benefits to the CPI, and rapidly rising health care costs. Benefit levels could be reduced across-the-board or targeted to the least needy individuals. One example of an across-the-board reduction that could be implemented quickly would be to reduce the cost-of-living adjustment for Social Security below current levels. Benefits under Medicare could also be cut across-the-board by raising the premium for part B (physician) coverage or by increasing coinsurance for hospital services. Moreover, ancillary Social Security benefits could be targeted by making benefit levels dependent on income. Premium or coinsurance increases under Medicare could also be targeted and scaled on the basis of each recipient's income.

APPENDIXES

APPENDIX A. EFFECTIVE TAX RATES AND THE IMPACT OF THE ACCELERATED COST RECOVERY SYSTEM BY ASSET TYPE

The most efficient (productive) composition of the capital stock is attained when effective tax rates are the same on each type of investment. Even though a firm may be subject to one statutory tax rate on the income generated by additional investments, the effective tax rate on a particular asset can differ from the statutory rate because of the timing of depreciation deductions, the level of investment tax credits, and the impact of inflation on replacement costs. When the federal tax treatment of capital costs results in effective tax rates which differ by asset type, the capital stock is not allocated to its most productive uses.

Under prior law, effective tax rates on short-lived assets were lower than those on long-lived assets in most cases (Table A-1), and equipment was favored over structures. Moreover, the (imputed) income from some nonbusiness assets, such as consumer durables and owner-occupied housing, was not subject to tax.

Under the Accelerated Cost Recovery System (ACRS), the relative differences among effective tax rates on different types of business assets are increased; 1/ and, thus, ACRS tends to foster an even less efficient composition of business capital, again with equipment receiving favorable treatment relative to structures. On the other hand, ACRS results in efficiency gains by lowering effective tax rates on business assets relative to the (zero) effective tax rates on untaxed nonbusiness assets. These gains in efficiency (output) may more than offset the efficiency losses due to an increased distortion of the business capital stock.

1/ Based on the assumptions underlying the calculations presented in the table, the effective tax rates on short-lived equipment investments become negative. This result implies that the tax benefits of ACRS for equipment are greater than the benefits of immediate expensing.

TABLE A-1. EFFECTIVE TAX/SUBSIDY RATES: SELECTED ASSETS, PRIOR LAW AND THE NEW ACCELERATED COST RECOVERY SYSTEM (AFTER PHASE-IN)

Asset Type	Prior Law		ACRS	
	6 Percent Inflation	12 Percent Inflation	6 Percent Inflation	12 Percent Inflation
Cars	.15	.36	-.65	-.08
Trucks, Buses, and Trailers	.09	.42	-1.08	-.09
Construction Equipment	.06	.34	-.60	-.07
General Industrial Equipment	.16	.36	-.40	-.05
Industrial Steam Equipment	.31	.44	-.27	-.04
Utility Power Plants	.27	.36	.15	.28
Industrial Buildings	.49	.53	.41	.48
Commercial Buildings	.48	.51	.36	.43
Apartment Buildings	.37	.42	.31	.37
Apartment Buildings (low income)	.37	.42	.30	.35

NOTE: The effect of prior law and ACRS on effective tax rates is derived from a complex formula, and the results may not be intuitive. The formula for the effective tax rate is $(r^* - r)/r^*$, where r^* is the real pre-tax return and r is the real after-tax return. r^* is in turn determined by the formula:

$$r^* = \frac{(r + d)(1-uz - k)}{(1 - u)} - d$$

where d is the economic depreciation rate, u is the statutory tax rate, z is the present value of depreciation deductions (discounted at the rate r + p, where p is the inflation rate, and k is the per-dollar value of the investment credit.

SOURCE: Effects of the Accelerated Cost Recovery System by Asset Types, Jane G. Gravelle, Congressional Research Service, August 31, 1981.

APPENDIX B. DO POLICY-INDUCED DEFICITS CAUSE INCREASES IN THE MONEY SUPPLY?

The apparent reaction of the Federal Reserve to changes in deficits and interest rates has varied over the recent past because of changes in the Fed's operational strategy. In general, increases in interest rates caused by policy-induced deficits or other factors might arouse concern on the part of the Federal Reserve for two reasons. First, changes in interest rates have impacts on the paper wealth of bond holders which the Fed might try to minimize; and second, changing interest rates affect investment, GNP, unemployment, and inflation, the so-called "ultimate targets" of monetary policy.

The Fed can control rising interest rates by buying Treasury bonds, but doing so causes bank reserves, and ultimately the money supply, to expand. Since expanding the money supply stimulates output and, in the longer run, prices, the Fed may prefer to allow interest rates to rise when the budget deficit increases if it is more concerned about possible impacts on prices than it is about the output effects caused by rises in interest rates. Indeed, since policy-induced increases in the deficit also stimulate output and prices, if the Fed believes that the fiscal actions result in too much stimulus to these economic variables it may reduce the money supply in the face of policy-induced deficits, rather than increasing it, perhaps causing interest rates to rise even more. As an a priori matter, then, it is not clear how the Fed will react to a discretionary increase in the deficit.

Recently, economists have used statistical methods to determine whether the observed practice of the Fed during the 1960's and 1970's was to expand the money supply when the deficit increased, other variables being equal. The widely-publicized results suggest that the answer is yes. 16/ The authors of the study conclude from their results that the Fed may act in the same way during the 1980's. If this interpretation is correct, it suggests that

16/ Michael Hamburger and Burton Zwick, "Deficits, Money, and Inflation," Journal of Monetary Economics, Vol. 7, 1981, pp. 141-150.

policy-induced deficits may cause higher rates of inflation in the long run, not only by reducing investment and productivity growth, but by increasing money growth as well.

The validity of these statistical results as indicators of current and future Federal Reserve policy is undermined, however, by the fact that the Fed has announced, and apparently plans to hold to, a firm shift in its emphasis regarding the control of money and interest rates since the time when these statistical tests were made. On October 6, 1979, the Fed announced that it was relaxing its control of interest rates in order to control money growth more closely. Since then, interest rates have been more volatile than ever before, and in particular, have been permitted to reach record levels. While this shift in Fed behavior is too recent to be subjected to reliable statistical tests, experience with such methods suggests that these tests might well confirm that monetary policy behavior has changed. 17/ If so, the increased emphasis on controlling monetary growth at the expense of interest rates may mean that the Fed will no longer allow the money supply to increase in the face of large federal deficits. If this is true, the long-run inflationary impact of policy-induced deficits will be reduced. At present, however, few analysts are willing to predict with confidence how monetary policy and deficits will interact.

17/ The Fed has announced similar, though less sweeping, changes in its emphasis on controlling money as opposed to interest rates in the past. Statistical testing procedures like those just cited have shown that such announced changes in policy are often reflected in actual Fed practice. See Gary Stern and Paul DeRosa, "Monetary Control and the Federal Funds Rate," Journal of Monetary Economics, vol. 3, 1977, pp. 217-230.

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